

REMARKS

Claims 1-4 are currently pending, wherein claims 2-4 have been canceled, and claim 1 has been amended. Favorable reconsideration is respectfully requested in view of the remarks presented herein below.

In paragraph 2 of the Office action ("Action"), the Examiner rejects claim 1 as being anticipated by U.S. Patent Publication No. 2003/0226370 to Tanimoto et al. ("Tanimoto"). Applicants respectfully traverse this rejection.

In order to support a rejection under 35 U.S.C. § 102, the cited reference must teach each and every claimed element. In the present case, Tanimoto fails to anticipate claim 1 because Tanimoto fails to disclose each and every claimed element. More specifically, Tanimoto fails to disclose an actuation control unit that actuates the low temperature compressor to increase the refrigerant suction pressure of the high temperature compressor when the high temperature compressor is suspended and given conditions including a condition concerning a request for cooling in the evaporator are met and then actuating the high temperature compressor as claimed.

Tanimoto discloses a refrigeration system that includes, *inter alia*, a chiller unit and a freezer unit. The freezer unit is provided with a freezing compressor for compressing a refrigerant in a total of two stages together with a compressor in an outdoor unit. Although the freezing compressor of Tanimoto when actuated inherently raises the pressure of the refrigerant exiting the freezing cooler to a first predetermined pressure PL1, nowhere in Tanimoto is there any disclosure of a control unit that actuates the freezing compressor prior to actuating the high temperature compressor to increase the refrigerant suction pressure of the outdoor compressor when the outdoor compressor is suspended and given conditions are met as recited in claim 1.

In conventional refrigeration systems as discussed on page 2 of the Specification, in order to shift the outdoor unit from the thermo-off state to the thermo-on state, the compressor is controlled not to start working if the refrigerant suction pressure is lower than a predetermined value. However, if the outside air temperature is -5°C or lower, for example, the saturation pressure of the refrigerant decreases to reduce the refrigerant pressure in the circuit. As a result, even if the freezer unit requests cooling and the electromagnetic value is opened, the refrigerant suction pressure may possibly remain low and the compressor may not be actuated. The claimed

invention overcomes this problem, by providing a control unit that actuates the freezing compressor in advance of actuating the high temperature compressor to increase the refrigerant suction pressure of the outdoor compressor when the outdoor compressor is suspended and given conditions are met. Accordingly, in the process of restarting the high temperature compressor, if given conditions including a condition concerning a request for cooling the evaporator are met, the low temperature compressor is actuated prior to actuating the high temperature compressor such that the refrigerant suction pressure of the high temperature compressor increases. Therefore, even if the outside air temperature is significantly low, the refrigerant suction pressure of the high temperature compressor will increase, smoothly actuating the high temperature compressor.

Although it may be true that the system of Tanimoto cannot change operation states of the various compressors without some control means, as asserted by the Examiner, it is NOT inherent that such a control means would actuate a low temperature compressor to increase the refrigerant suction pressure of the high temperature compressor when the high temperature compressor is suspended and given conditions including a condition concerning a request for cooling in the evaporator are met, *and then actuate the high temperature compressor* as recited in claim 1. At best, Tanimoto inherently only discloses a control means for actuating the various compressors, not for executing the specific control recited in claim 1. Accordingly, claim 1 is patentable over Tanimoto for at least the reason that Tanimoto fails to disclose each and every claimed element.

The application is in condition for allowance. Notice of same is earnestly solicited. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Penny Caudle Reg. No. 46,607 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 10/580,335
Amendment dated January 29, 2010
After Final Office Action of August 6, 2009

Docket No.: 4633-0170PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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